Keating & Bennett, LLP 36856.1435 Takaaki ASADA et al. METHOD OF DRIVING... Page 1 of 14

FIG.1A

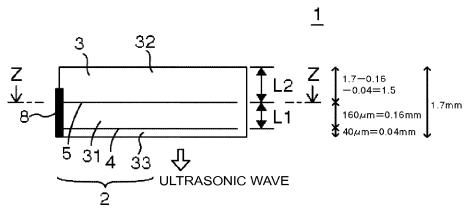
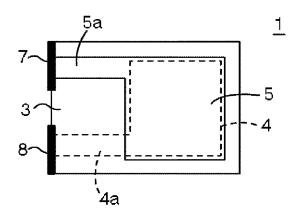


FIG.1B



Keating & Bennett, LLP 36856.1435 Takaaki ASADA et al. METHOD OF DRIVING... Page 2 of 14

FIG.2A

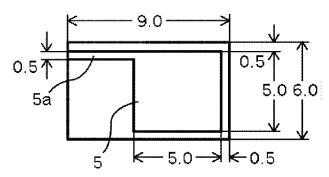


FIG.2B

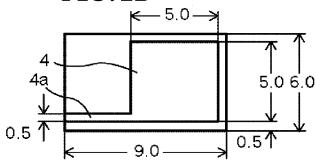
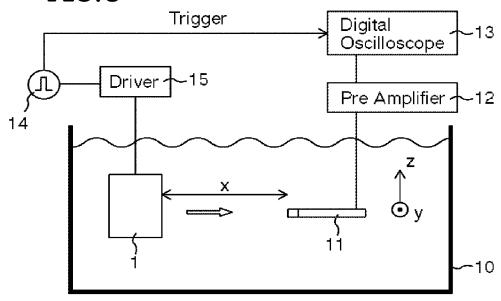
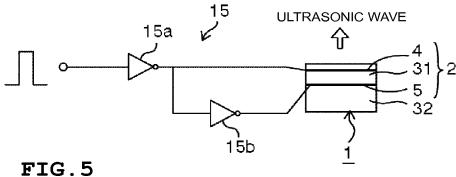


FIG.3



Keating & Bennett, LLP 36856.1435 Takaaki ASADA et al. METHOD OF DRIVING... Page 3 of 14

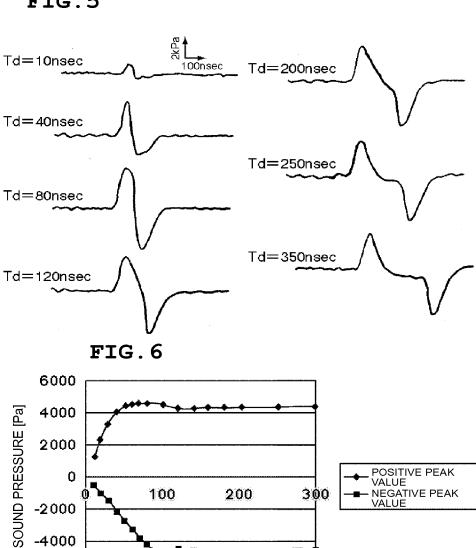
FIG.4



-2000

-4000

-6000



200

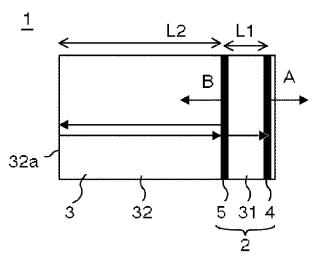
DRIVE PULSE WIDTH [nsec](Td)

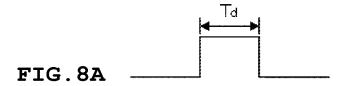
300

100

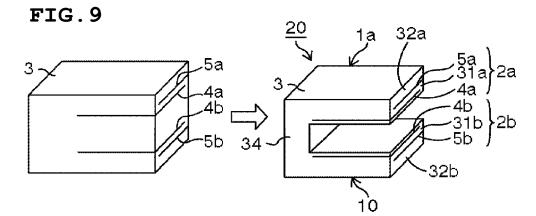
Keating & Bennett, LLP 36856.1435 Takaaki ASADA et al. METHOD OF DRIVING... Page 4 of 14

FIG.7



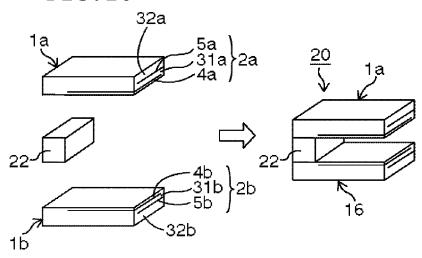


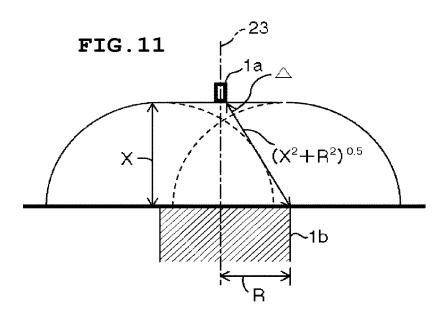




Keating & Bennett, LLP 36856.1435 Takaaki ASADA et al. METHOD OF DRIVING... Page 5 of 14

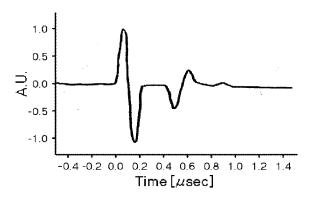
FIG.10





Keating & Bennett, LLP 36856.1435 Takaaki ASADA et al. METHOD OF DRIVING... Page 6 of 14

FIG. 12A



**FIG. 12B** 

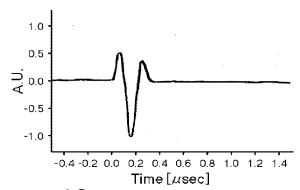
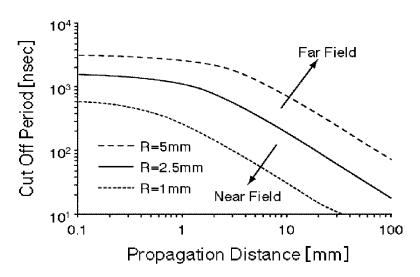
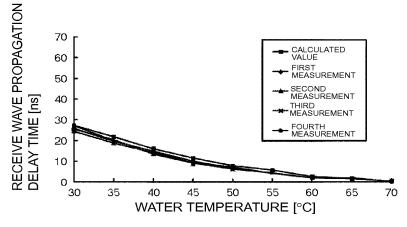


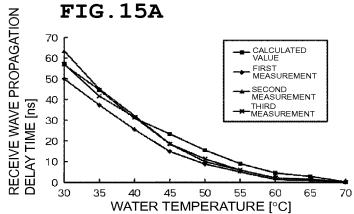
FIG.13



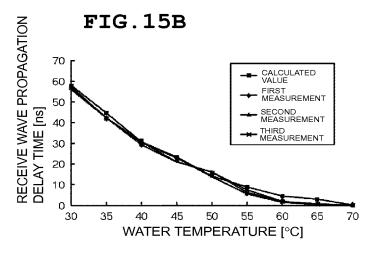
Keating & Bennett, LLP 36856.1435 Takaaki ASADA et al. METHOD OF DRIVING... Page 7 of 14

**FIG. 14** 





SAMPLE BONDED WITH EPOXY RESIN



SAMPLE BONDED WITH GLASS

Keating & Bennett, LLP 36856.1435 Takaaki ASADA et al. METHOD OF DRIVING... Page 8 of 14

FIG.16

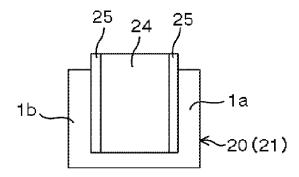


FIG.17A

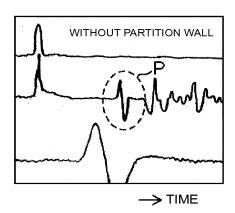
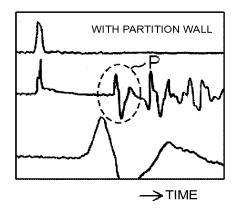


FIG.17B



Keating & Bennett, LLP 36856.1435 Takaaki ASADA et al. METHOD OF DRIVING... Page 9 of 14

FIG. 18

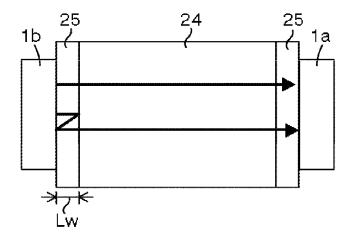


FIG.19A

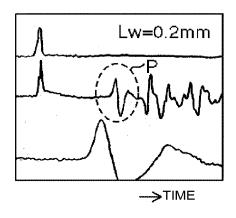
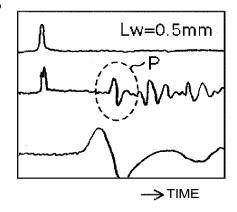
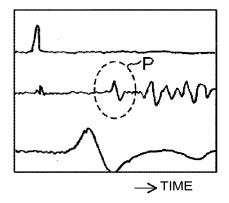


FIG.19B



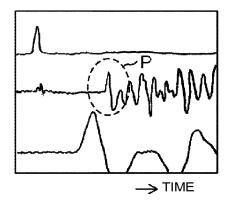
Keating & Bennett, LLP 36856.1435 Takaaki ASADA et al. METHOD OF DRIVING... Page 10 of 14

FIG.20A



MEASUREMENT RESULT OF A SAMPLE BONDED WITH A POLYCARBONATE HAVING A THICKNESS OF 0.5 mm

FIG.20B



MEASUREMENT RESULT OF A SAMPLE BONDED WITH A LIQUID CRYSTAL POLYMER HAVING A THICKNESS OF 0.5 mm

Keating & Bennett, LLP 36856.1435 Takaaki ASADA et al. METHOD OF DRIVING... Page 11 of 14

## FIG.21

MATERIAL	DENSITY (kg/m³)	SOUND SPEED (m/s)	CHARACTERISTIC IMPEDANCE (10 <sup>6</sup> kg/s/m²)
POLYCARBONATE	1171	2330	2.73
LIQUID CRYSTAL POLYMER	1824	3470	6.33
CERAMIC	7800	3950	30.8
WATER	998	1483	1.48

Keating & Bennett, LLP 36856.1435 Takaaki ASADA et al. METHOD OF DRIVING... Page 12 of 14

## FIG.22A

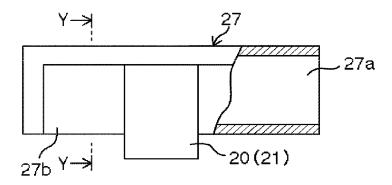


FIG.22B

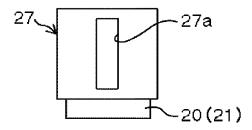
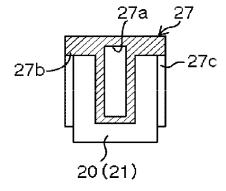
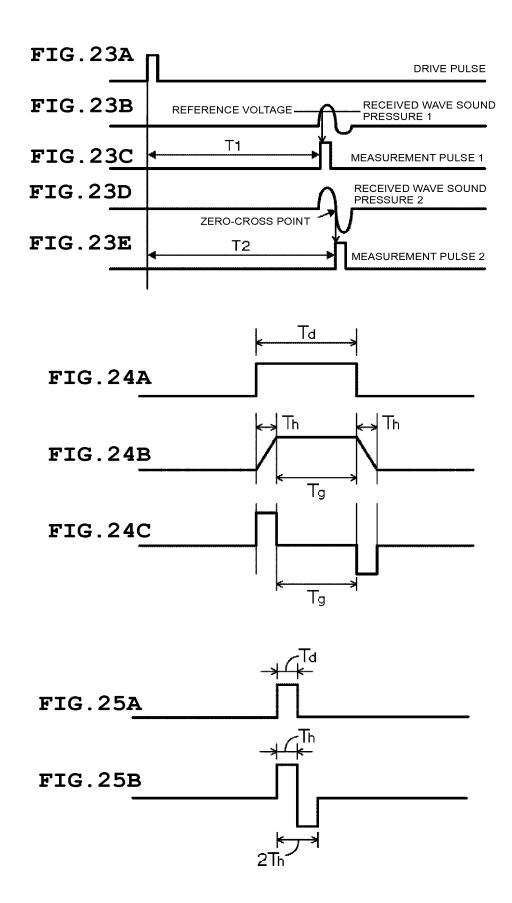


FIG.22C



Keating & Bennett, LLP 36856.1435 Takaaki ASADA et al. METHOD OF DRIVING... Page 13 of 14



Keating & Bennett, LLP 36856.1435 Takaaki ASADA et al. METHOD OF DRIVING... Page 14 of 14

